

WHAT IS CLAIMED IS:

1. A system for switching a communication mode of a pad-detachable refrigerator, comprising:

5 a client pad detachably attached to an outer surface of said refrigerator;

communication module means installed in said refrigerator for transmitting and receiving signals to/from said client pad by wire or wirelessly; and

10 refrigerator control means for controlling said communication module means to automatically switch said communication mode of said refrigerator with said client pad to a wired/wireless communication mode according to the attachment/detachment of said client pad.

15 2. The system as set forth in claim 1, further comprising:

20 a contact switch provided at a portion of the outer surface of said refrigerator with which said client pad is brought into contact, said contact switch being turned on/off according to the attachment/detachment of said client pad; and

25 an input/output sensor electrically connected with said contact switch, said sensor sensing an on/off state of said contact switch and transferring the sensed result to said refrigerator control means.

3. The system as set forth in claim 2, wherein said contact switch is connected to a power supply voltage source to apply a desired voltage to said refrigerator control means when it is turned on.

5

4. The system as set forth in claim 1, further comprising a contact switch provided at a portion of the outer surface of said refrigerator with which said client pad is brought into contact, said contact switch being turned on/off according to the attachment/detachment of said client pad and electrically connected with said refrigerator control means when it is turned on.

5. The system as set forth in claim 1, wherein said communication module means includes:

a wired communication module for transmitting and receiving signals to/from said client pad in said wired communication mode when said client pad is attached to said refrigerator; and

a wireless communication module for transmitting and receiving signals to/from said client pad in said wireless communication mode when said client pad is detached from said refrigerator.

6. The system as set forth in claim 5, wherein said

communication module means further includes an Internet modem for transmitting and receiving signals to/from an external system over the Internet.

5           7. The system as set forth in claim 1, wherein said refrigerator control means includes:

          a main controller for transmitting and receiving signals to/from one or more clients connected to a home network constructed in a building to perform a home server function;

10          and

          an input/output control hub for controlling said communication module means to switch said communication mode of said refrigerator to said wired/wireless communication mode according to the attachment/detachment of said client pad.

15           8. The system as set forth in claim 1, wherein said client pad includes:

          a wired communication module for transmitting and receiving signals to/from said refrigerator control means by wire when said client pad is attached to said refrigerator;

20           a wireless communication module for wirelessly transmitting and receiving signals to/from said refrigerator control means when said client pad is detached from said refrigerator;

25           a controller for controlling operations based on the

signals transmitted and received to/from said refrigerator control means through said wired communication module or wireless communication module; and

an output unit for displaying operation results based on the control of said controller.

9. The system as set forth in claim 8, wherein said client pad further includes an input unit, said input unit having one or more buttons for directly inputting a user's control commands.

10. The system as set forth in claim 8, wherein said client pad further includes an input unit configured integrally with said output unit for forming a touch panel enabling a touch input.

11. A method for switching a communication mode of a pad-detachable refrigerator, comprising the steps of:

a) sensing attachment/detachment of a client pad to/from said refrigerator;

b) enabling a wired communication module if the attachment of said client pad is sensed and a wireless communication module if the detachment of said client pad is sensed;

c) transmitting and receiving signals to/from said

client pad through said wired communication module or wireless communication module; and

d) controlling an operation of said client pad and externally outputting results of the operation control.